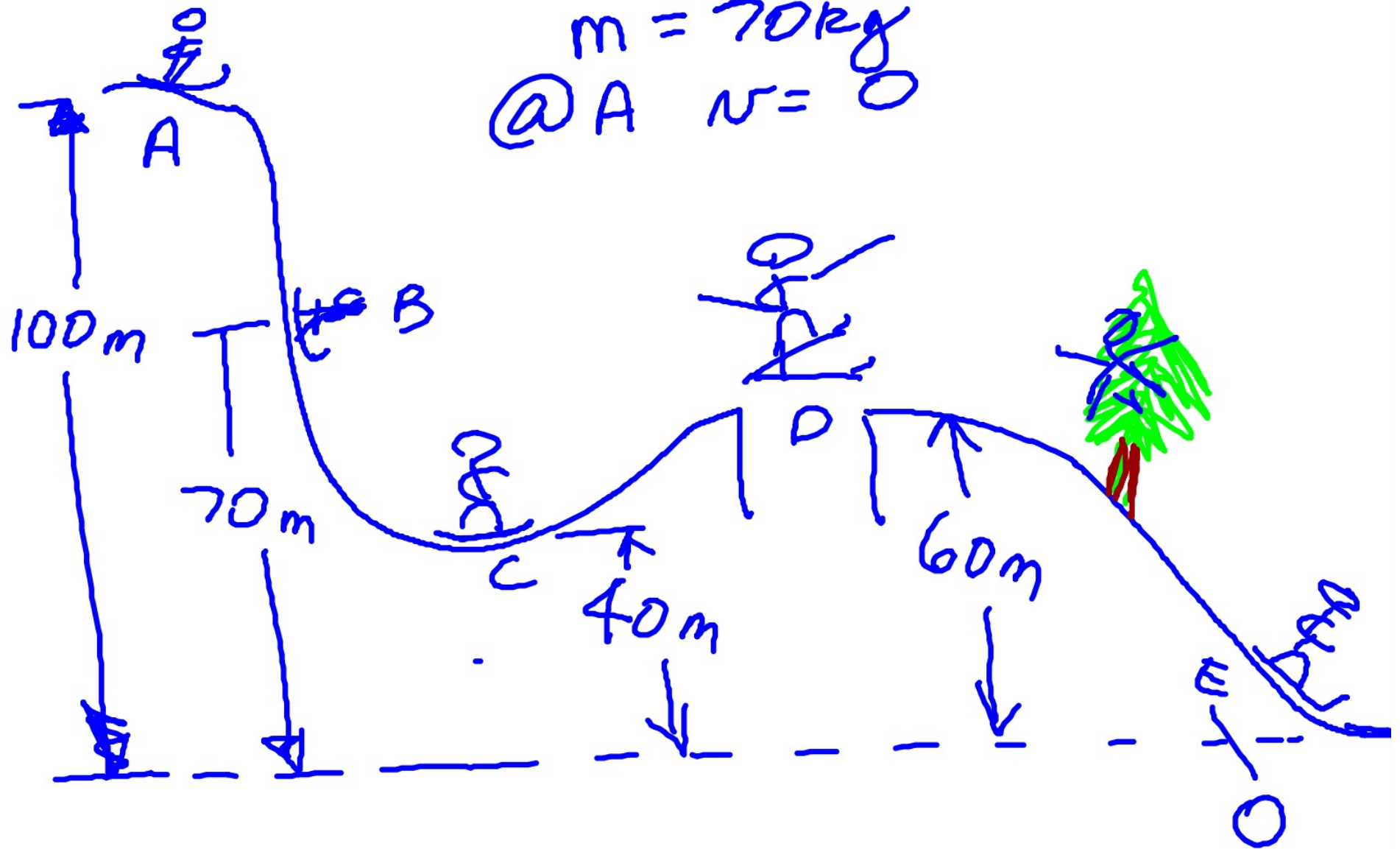


$m = 70 \text{ kg}$
@ A $N = 0$



	h	PE	v	KE	ME
A	100m	68600J	0	0	68600J
B	70m	48020J	24.25 m/s	20580J	68600J
C	40m	27440J	34.29 m/s	41160J	68600J
D	60m	41160J	28.00 m/s	27440J	68600J
E	0m	0J	44.27 m/s	68600J	68600J

$$\textcircled{A} \quad PE = mgh = (70\text{kg})(9.8\text{m/s}^2)(100\text{m})$$

$$= 68600\text{J}$$

$$KE = \frac{1}{2}mv^2 = 0\text{J}$$

$$ME = PE + KE = 68600\text{J} + 0$$

$$= 68600\text{J}$$

$$\textcircled{B} \quad PE = mgh = (70\text{kg})(9.8)(70\text{m})$$

$$48020\text{J}$$

$$ME = PE + KE$$

$$KE = ME - PE$$

$$68600 - 48020 = 20,580\text{J}$$

$$KE = \frac{1}{2}mv^2$$

$$v = \sqrt{2KE/m}$$

$$v = 24.25\text{m/s}$$

$$\textcircled{C} \quad PE = mgh = (70\text{kg})(9.8\text{m/s}^2)(40\text{m})$$

$$PE = 27440\text{ J}$$

$$ME = PE + KE$$

$$KE = ME - PE = 68600 - 27440 =$$

$$KE = 41160\text{ J}$$

$$v = \sqrt{2KE/m} = \sqrt{\frac{2(41160)}{70}} = 34.29\text{ m/s}$$

$$\textcircled{D} \quad PE = mgh = (70\text{kg})(9.8\text{m/s}^2)(60\text{m})$$
$$= 41160\text{ J}$$

$$ME = PE + KE$$

$$KE = ME - PE = 68600 - 41160$$

$$KE = 27440$$

$$v = \sqrt{2KE/m} = \sqrt{\frac{2(27440)}{70}}$$

$$v = 28\text{ m/s}$$

$$\textcircled{E} \quad PE = mgh = 70 \text{ kg} (9.8 \text{ m/s}^2) (0 \text{ m}) = \boxed{0 \text{ J}}_{PE}$$

$$ME = PE + KE$$

$$KE = ME - PE = 68600 - 0 = 68600 \text{ J}$$

$$\boxed{KE = 68600 \text{ J}}$$

$$v = \sqrt{\frac{2KE}{m}} = \sqrt{\frac{2(68600)}{70}}$$

$$\boxed{v = 44.27 \text{ m/s}}$$